



DEPARTMENT OF HOMELAND SECURITY

Coast Guard

[Docket No. USCG-2021-0180]

Cooperative Research and Development Agreement – Beyond Visual Line of Sight (BVLOS)

Technology for Coast Guard (CG) Unmanned Aircraft System (UAS) Operations

AGENCY: Coast Guard, DHS.

ACTION: Notice of intent; request for comments.

SUMMARY: The Coast Guard announces its intent to enter into one or more cooperative research and development agreements (CRADA) with companies to evaluate a detect and avoid (DAA) system to determine its potential use in a maritime environment to enable the Coast Guard to safely fly sUAS beyond visual line of sight (BVLOS). The Coast Guard will conduct flight testing and evaluations of sUAS under a wide variety of simulated but realistic and relevant real-world maritime operational scenarios, such as: law enforcement; search and rescue; and maritime environmental responses. The Coast Guard is currently considering separate partnerships with Scientific Applications & Research Associates (SARA) Inc., Iris Automation Inc., and Echodyne Corp. and solicits public comment on the possible participation of other parties in the proposed CRADAs, and the nature of that participation. The Coast Guard also invites other potential non-Federal participants, who have the interest and capability to bring similar contributions to this type of research, to consider submitting proposals for consideration in similar CRADAs.

DATES: Comments must reach the Coast Guard on or before [INSERT DATE 30 DAYS AFTER DATE OF PUBLICATION IN THE FEDERAL REGISTER.]. Synopses of proposals regarding future CRADAs must also reach the Coast Guard on or before [INSERT DATE 30

DAYS AFTER DATE OF PUBLICATION IN THE FEDERAL REGISTER.].

ADDRESSES: Submit comments online at <http://www.regulations.gov> following website instructions. Submit synopses of proposals regarding future CRADAs to Mr. Steve Dunn at his address listed in the FOR FURTHER INFORMATION CONTACT section.

FOR FURTHER INFORMATION CONTACT: If you have questions on this notice or wish to submit proposals for future CRADAs, contact Mr. Steve Dunn, Project Official, Aviation Branch, U.S. Coast Guard Research and Development Center, 1 Chelsea Street, New London, CT 06320, telephone 860-271-2600, e-mail RDC-Info@uscg.mil .

SUPPLEMENTARY INFORMATION:

Public Participation and Request for Comments

We request public comments on this notice. Although we do not plan to publish responses to comments in the *Federal Register*, we will respond directly to commenters and may modify our proposal in light of comments.

Comments should be marked with docket number USCG-2021-0180 and should provide a reason for each suggestion or recommendation. You should provide personal contact information so that we can contact you if we have questions regarding your comments; but please note that all comments will be posted to the online docket without change and that any personal information you include can be searchable online. For more about privacy and the docket, visit <http://www.regulations.gov/privacyNotice>. We do accept anonymous comments.

We encourage you to submit comments through the Federal Portal at <http://www.regulations.gov>. If your material cannot be submitted using <http://www.regulations.gov>, contact the Coast Guard (see FOR FURTHER INFORMATION CONTACT). Documents mentioned in this notice and all public comments, will be in our online docket at <http://www.regulations.gov> and can be viewed by following that website's instructions. Additionally, if you go to the online docket and sign up for email alerts, you will be notified when comments are posted.

Do not submit detailed proposals for future CRADAs to <http://www.regulations.gov>. Instead, submit them directly to the Coast Guard (see FOR FURTHER INFORMATION CONTACT).

Discussion

CRADAs are authorized under 15 U.S.C. 3710(a).¹ A CRADA promotes the transfer of technology to the private sector for commercial use, as well as specified research or development efforts that are consistent with the mission of the Federal parties to the CRADA. The Federal party or parties agree with one or more non-Federal parties to share research resources, but the Federal party does not contribute funding.

CRADAs are not procurement contracts. Care is taken to ensure that CRADAs are not used to circumvent the contracting process. CRADAs have a specific purpose and should not be confused with procurement contracts, grants, and other type of agreements.

Under the proposed CRADAs, the Coast Guard's Research and Development Center (RDC) will collaborate with one or more non-Federal participants. Together, the RDC and the non-Federal participants will evaluate detect and avoid (DAA) systems to determine their potential for use in a maritime environment to safely fly sUAS beyond visual line of sight (BVLOS).

We anticipate that the Coast Guard's contributions under the proposed CRADAs will include the following:

- (1) In conjunction with the non-Federal participant(s), develop the demonstration test plan to be executed under the CRADA;
- (2) Provide the sUAS test range, test range support, facilities, and all approvals required for a sUAS demonstration and assessment under the CRADA;

¹ The statute confers this authority on the head of each Federal agency. The Secretary of DHS's authority is delegated to the Coast Guard and other DHS organizational elements by DHS Delegation No. 0160.1, para. II.B.34.

- (3) Provide government available sUAS platforms and associated equipment necessary to conduct the demonstration described in the demonstration test plan;
- (4) Provide all required operators and technicians to conduct the demonstration;
- (5) Conduct the privacy threshold analysis required for the demonstration;
- (6) Conduct the privacy impact assessment required for the demonstration;
- (7) Coordinate any required spectrum approval for the sUAS;
- (8) Coordinate and receive any required interim flight clearance for the demonstration;
- (9) Provide any required airspace coordination and de-confliction for the demonstration test plan;
- (10) Collaboratively collect and analyze demonstration test plan data; and
- (11) Collaboratively develop a demonstration final report documenting the methodologies, findings, conclusions, and recommendations of this CRADA work.

We anticipate that the non-Federal participants' contributions under the proposed CRADAs will include the following:

- (1) Provide DAA system and all other equipment to conduct the demonstration described in the demonstration test plan;
- (2) Provide all required operators and technicians to integrate DAA in government sUAS platform and conduct the demonstration;
- (3) Provide technical data for the DAA to be utilized;
- (4) Provide shipment and delivery of all DAA equipment required for the demonstration; and
- (5) Provide travel and associated personnel and other expenses as required.
- (6) Provide documentation, analysis, graphical user interfaces, and algorithms supporting future FAA DAA BVLOS authorizations.

The Coast Guard reserves the right to select for CRADA participants all, some, or no proposals submitted for this CRADA. The Coast Guard will provide no funding for reimbursement of proposal development costs. Proposals and any other material submitted in response to this notice will not be returned. Proposals submitted are expected to be unclassified and have no more than five single-sided pages (excluding cover page, DD 1494, JF-12, etc.). The Coast Guard will select proposals at its sole discretion on the basis of:

- (1) How well they communicate an understanding of, and ability to meet, the proposed CRADA's goal; and
- (2) How well they address the following criteria:
 - (a) Technical capability to support the non-Federal party contributions described; and
 - (b) Resources available for supporting the non-Federal party contributions described.

Currently, the Coast Guard is considering the above named companies for participation in separate CRADAs, because they have a solution in place for providing detect and avoid capabilities for UAS. However, we do not wish to exclude other viable participants from this or future similar CRADAs.

This is a technology demonstration effort to evaluate and assess ship/ground-based technologies which support BVLOS UAS operations. The goal of these CRADAs is to identify and investigate the potential of the sUAS and their airborne sensors to determine their potential use in a maritime environment by the first responder and the DHS operational components. Special consideration will be given to small business firms/consortia, and preference will be given to business units located in the U.S.

This notice is issued under the authority of 5 U.S.C. 552(a) and 15 U.S.C. 3710(a).

Dated: April 20, 2021.

Captain Daniel P. Keane
USCG,

Commanding Officer,

U.S. Coast Guard Research and Development Center.

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